

## **EFFECT OF APAMARG (ACHYRANTHES AASPERA LINN.) IN LEPROSY**

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## **INTRODUCTION**

LEPROSY is one of the socio-medical hazards. One who is afflicted with leprosy has got little scope in society as well as for the treatment. For the treatment because still such treatment is to be invented which can be fully relief having quick and certain action without much of the toxic effects. There are various handicaps in the field of leprosy research of which the main are our incapability of producing the disease experimentally and to culture the bacteria successfully. Really these are the responsible factors for the present miniature form of the leprosy treatment.

Leprosy in India is very common. The disease is traceable upto vedic age which is placed to be somewhere upto 5000 B.C. India and Egypt are regarded to be the oldest homes of leprosy from where the disease started and spread.

There is a concept based on Inductive logic that nature manages to produce good and evil together. The same must account for medicine. The area where a particular disease is most prevalent

must have its antidote in the nature. A similar concept is found in Indian Medical Literature that drugs of a particular area are more effective for the persons of the same area. But these propositions can not stand for scientific evaluations. This is more true for the herbal preparations and for the medicines of animal origin. This principle is well applicable in leprosy. India is regarded to be the pioneer country to give the herbal remedy (*Hyndocarpus wightiana*), the first and foremost treatment of leprosy. But it is our feeling that it is not necessary. That with this the Indian flora has exhausted for any further contribution.

There are various aspects, aims and objects of treatment in leprosy, depending upon the type and stage of the disease and social and economic Condition of the patient. Leprosy is a chronic and self-limiting disease, Usually the disease is not fatal. Death is due to some other concurrent complication. There are periods of quiescence and exacerbations. Reaction is the period when the disease is most distressing, Many of the complications arise during this period, Therefore one of the aims of the treatment can be only to control the reaction and the activity of the disease. So the disease May not advance and it may die of its own death.

The manifestations of reaction in Leprosy are different in different types of Leprosy. The reaction in lepromatous leprosy is known as true Lepra reaction. The lepra reaction in lepromatous Patient may be either of a short duration or it may continue for months and months together. Thus the management of true lepra reaction is itself a problem. Now a days corticosteroids are being successfully used for controlling this condition but the effect is very transient. There are patients on record who are taking continuous corticosteroid therapy regularly since more than two years and if the treatment has stopped even for a day or two the temperature shoots up and all the other Manifestations of lepra reaction reappears in no time. Peptic ulcer is one of the common complications of the prolonged therapy with Corticosteroids. The older treatment of this condition are new antiallergic Products, antimony and calcium Preparations. Therefore one aim and object of an effort to search for a remedy for leprosy will be to find out an ideal treatment. Which can make the disease inactive and control the reaction Successfully without causing any toxic or side effects.

*Achyranthes aspera* is being tried for this disease in this centre. It has been used in Indian Medicine as diuretic in *of general anasarca* which is mostly due to its alkaline contents. It has been also used in various types of insects and reptile bites for reducing local Oedema and for anti Poisonous effects. The red variety of plant has been specially indicated in 'Rajnighantu' for healing of wounds and ulcers. Thus the efficiency of the plant in skin diseases according

to classical description is limited to some types of dermatitis insect-bite and ulcers, It is not clearly mentioned that the drug has got any action on leprosy. Recently some information has been gathered that it has got definite action on skin lesions of leprosy. Keeping in view the classical descriptions of the drug and the recent information it was thought proper to investigate the action of *Achyranthes aspera* on different varieties and Stages of leprosy.

## MATERIALS AND METHODS

The patients for study were collected from general out-patient departments. The clinical history of patient is recorded, skin and lesions are diagrammatically represented by Dharmendra's method, Photograph of the patient exposing the diseased part is invariably snapped. For laboratory diagnosis smears are collected from different parts of the body and are stained with modified Ziehl Nelson method to demonstrate acid fast bacilli and the bacteriological index is worked out in the Positive case, Histopathological study of the skin have been also performed in some cases. E.S.R. is recorded to make note of the activities of disease and for differential diagnosis Kahn's Test and Chebra Antimony Test is performed where required. Ultimately the cases are classified in two broad heads (1) Lepromatous (2) Non Lepromatous. *Achyranthes aspera* for the treatment has been collected.

Full plant including some portion of the root had been dried and kept for use. Out of it 1 : 2 decoction is prepared by direct boiling. The doses are one oz twice daily by oral route. The patients in the stage of acute reaction were advised to take rest in bed and some times Antipyretic and analgesic medicines were prescribed when necessary. They were advised to take nutritious diet within their capacities' and to observe the hygienic conditions around them as far as possible.

## OBSERVATION

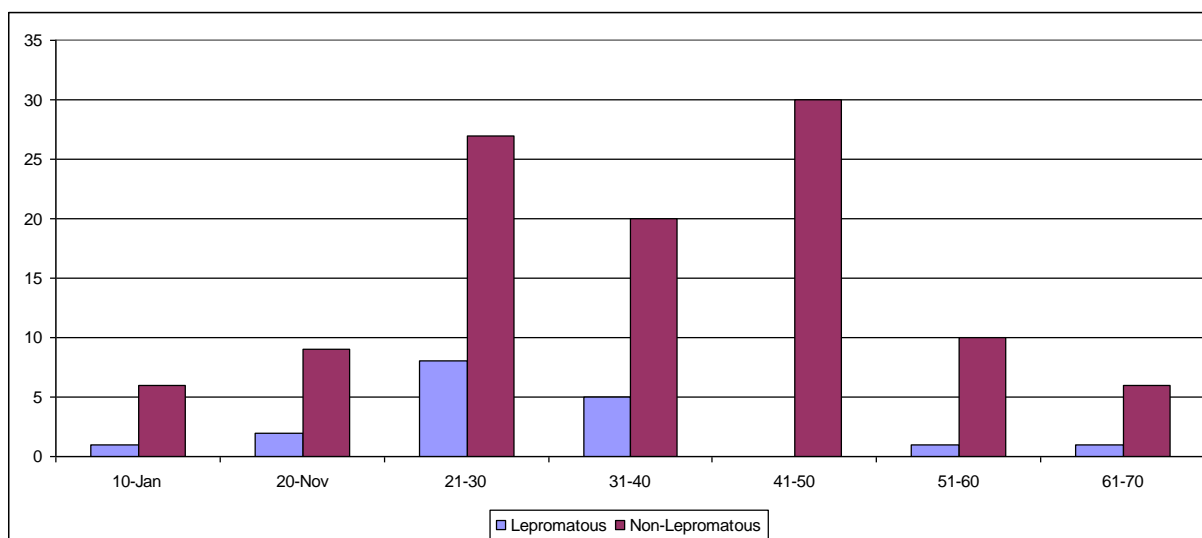
Total number of the patients registered for investigation was 127. Two types of patients have been noticed. One who are very much horrified with this disease and the other who are quite careless about it and want to hide it as long as possible. There are many misunderstandings regarding this condition. The patients suffering from all types of skin diseases have visited O.P.D. Moreover the patients of leucoderma invariably identify themselves with the leprosy. The cause of these misunderstandings seems to be the use of the word 'Kusntha' in Indian medicine for various types of Skin diseases in common.

Due to chronic nature of the disease & unsatisfactory treatment the people are so much disheartened and apathetic about this disease that it is very difficult to convince them for cure. This lack of confidence is a great hinderance for continuation of treatment upto the required time. When the acute reaction is passed off most of the patients have been found to discontinue the treatment. The patients' statement regarding the certainty of taking the treatment is not always correct.

The total number of patients registered for investigation was 127, out of which 19 patients, had positive skin smears and 108 patients had negative smears. The positive cases were mostly of lepromatous type. Their age and sex incidences were as follows :

**Table: Age Incidence of Leprosy patients.**

Age Group			Lepromatous	Non-Lepromatous	Total
1-10	1	6	7		
11-20			2	9	11
21-30			8	27	35
31-40			5	20	26
41-50			0	30	30
51-60			1	10	11
61-70			1	6	7
<b>Total</b>			<b>19</b>	<b>108</b>	<b>127</b>



**Table: Sex Incidence in Leprosy patients.**

Sex	Lepromatous	Non-Lepromatous
Male	16-41.2%	86-79.63%
Female	3-15.81%	22-20.7%

The above tables show that the maximum age incidence of leprosy patients in this part of our country is in between 20 to 50 years of the age. The lepromatous variety develops earlier than the tuberculoid variety. The ratio of the male patients as compared to the female patient is 4:1.

The patients who are under study are usually from poor income group diet. Their living conditions are unhygienic.

### **Response of treatment in patients with positive skin smears**

Out of the 19 patients who had positive skin smears by ordinary method. Fourteen patients came in the stage of reaction and rest of them had active lesions but none of them was in quiescent stage. On the whole the response of treatment looks to be encouraging. We had opportunity to have repeated bacteriological index in nine patients. Out of them six patients showed a clear fall in the bacteriological index. In two patients it was more or less the same and in one patient who was negative previously became positive later on. But the clinical improvement was noted near about in all cases. Reaction subsided, the thickness of the patches and erythema was reduced. Marked improvement was noticed in few cases of erythema nodosum. Oedema of hands and feet passed off & marked improvement was reported in burning, tingling and pain. Nerve tenderness was also controlled in quite good number of patients. The area of anesthesia have been also reduced in some Gases. The trophic ulcers and ulcers of lepra-reaction had tendency to subside quickly with this treatment. Besides these specific improvement there was general improvement in appetite, constipation & their general feeling. The detailed description of their progress is given in table No. 3.

### **Response of treatment in Tuberculoid type of Leprosy patients**

Satisfactory progress was found in skin lesions, Activity of the disease was controlled erythema subsided and the thickening of the skin was reduced. Nerve tenderness and nerve thickening were also reduced but there was very little improvement in reaction cases oedema of hand and feet, oedematous skin lesions subsided very quickly. But this can not be ascertained to be the effect of medicine because it has been observed and reported that the reaction in tuberculoid cases may subside even without treatment. In few cases the aggravation of the symptoms was noted instead of improvement, the details of improvement is given in table No. 4.

**SUMMARY**

One hundred and twenty seven cases of Leprosy have been studied of different varieties. Out of them a good number of patients have positive skin smears. They were treated with has been found to be effective both in reaction and quiescent stage of the disease. Skin lesions and ulcers have tendency to subside quickly with this treatment. Bacteriological Index has also improved.

**Table No. 3: Progress report of Leprosy patients having positive skin smear.**

S.No.	Age Sex	Duration Treatment in months	Bacteriological index before treatment	Bacteriological index after treatment	Results of treatment in signs and symptoms
1	40 M	17	3	1	Erythematous patches subsided burning and tingling relieved. Nerve tenderness and nerve thickening reduced.
2	50 M	14	4	3	Ulcers healed. Erythematous Patches subsided. Oedema subsided, Burning and tingling subsided. Nerve tenderness and thickening reduced. Glove and Stocking anaesthesia reduced.
3	12 M	12	4	3.83	Ulcers healed. Oedema subsided. Erythema nodosum and nerve thickening subsided.
4	28 M	11	-	3	Burning and tingling partially relieved. Oedema relieved, No improvement in skin patches, nerve thickening and anaesthesia.
5	55F	11	1	-	Oedema and erythematous patches subsided. Burning and tingling relieved. Nerve tenderness and nerve thickening partially relieved.
6	28M	10	4	2	Ulcers healed, Oedema subsided. Skin rashes subsided burning tingling partially relieved.
7	35M	8	2	-	Erythematous patches and Oedema subsided. Burning and tingling partially relieved. Nerve thickening and tenderness reduced. Little improvement in anaesthesia.
8	25M	6	2	1	Erythematous patches and oedema relieved. Burning, tingling, nerve tenderness and. nerve thickening partially relieved.
9	M	5	2	-	Burning and tingling partially relieved, Nerve thickening and nerve tenderness

					slightly relieved.
10	M	5	3.5	3.5	Erythema nodosum and Patches subsiding. Oedema subsided glove and stocking anesthesia partially relieved. Nerve thickening and nerve tenderness partially relived. :
11	M	4	3.35	-	Slight improvement in erythema nodosum. No improvement in burning tingling nerve thickness and nerve tenderness.
12	M	3	2	-	Erythema of the patches slightly reduced no improvement in glove and stocking anesthesia.
13	M	2	1.5	-	Erythema of the -skin patches partially relieved. No improvement in burning tingling, nerve thickening and nerve tenderness.
14	M	2	2.33	-	Oedema and Erythematous patches partially relieved, Partial improvement in burning and tingling. No improvement. in nerve tenderness nerve thickening and anaesthesia.
15	M	1	1	-	No improvement yet noted.
16	M	3	-	-	Erythema nodosum and oedema subsiding. Burning and tingling partially relieved.
17-19	-	-	-	-	Are recent cases under observation.

**Table 4: Result of treatment in patients of Leprosy having Negative skin smears.**

S.N	Chief complaints	Found in No. of cases	Relieved	Partially relieved	No relief	Aggregation
1	Burning sensation	44	21	19	4	2
2	Tingling Sensation	46	12	30	2	2
3	Pain	27	18	4	5	2
4	Nerve thickening	46	4	33	9	
		4		2		
5	Nerve tenderness	25	10	3	1	
6	Claw hand	4			4	
7	Anaesthesia	46				
8	Oedematous skin patches	43	12	21	10	
9	Oedema	14				
10	Atrophic Changes	2				
11	Trophic Ulcers	7	3	2	1	1

